Please rewrite the following claims as indicated below.

1.(amended) [An oxygenated hydrocarbon] A methanol and ethanol fuel gas autothermal reformer assembly for converting a methanol or ethanol fuel gas stream into a hydrogen-enriched process gas stream, said assembly comprising:
a) a monolithic open cell foam [core] catalyst bed, said catalyst bed including an inlet end and an outlet end, a first [an] inlet region [portion] of said catalyst bed being provided with a catalyst which is operable to combust a portion of the fuel gas stream so as to raise the temperature of said [catalyst bed] fuel gas stream in said first region to a temperature in the range of about 300º to about 500ºF while [minimizing] inhibiting carbon deposition in catalyzed cells of said foam [core] catalyst bed, and said catalyst bed further including a subsequent second region which contains a copper and/or zinc catalyst;
b) a fuel gas stream inlet passage, said fuel gas stream inlet passage being disposed in heat exchange relationship with a [an outlet processed fuel] process gas stream outlet passage from said catalyst bed whereby heat [will be] is transferred to said fuel gas stream inlet passage from the ~~processed~~ process gas stream;
c) an air inlet passage, said air inlet passage being disposed in heat exchange relationship with the [processed] process gas stream whereby heat from the [processed] process gas stream [will be] is transferred to said air inlet passage; and
d) a fuel gas stream reforming catalyst deposited in said foam [core] catalyst bed.

2.(amended) The autothermal reformer assembly of Claim 1 wherein said catalyst in said first region of said catalyst bed includes a [nobel] noble metal catalyst and calcium oxide.

7.(amended) The autothermal reformer assembly of Claim [4] 1 wherein said first region of said foam [core] catalyst bed contains an iron oxide[/] catalyst in combination with calcium oxide [catalyst and said second region of said foam core catalyst bed contains a copper or copper/zinc catalyst].

9.(amended) The autothermal reformer assembly of Claim [8] 2 wherein said noble metal catalyst is a catalyst selected from the group consisting of platinum, palladium

B A6 ~~and~~ rhodium, [or] and mixtures thereof.

12.(amended) The autothermal reformer assembly of Claim 1 wherein said foam [core] catalyst bed includes at least one ceramic foam support body.

A7 13.(amended) The autothermal reformer assembly of Claim 1 wherein said foam [core] catalyst bed includes [a high] an autothermal reformer-operating temperature-[compatable] compatible metal support selected from the group consisting of stainless steel, nickel alloys and iron-aluminum alloys.

In Claim 14, line 1, please delete "12" and insert --13--.

A8 17.(amended) The autothermal reformer assembly of Claim 1 wherein said fuel gas stream inlet passage contains a fuel gas/steam mixture.

20.(amended) A methanol fuel gas reformer assembly comprising:
a) a cylindrical monolithic open cell foam [core] catalyst bed, said catalyst bed including an inlet end and an outlet end;
b) a fuel gas/steam mixture inlet passage; and
A9 c) fuel gas reforming catalysts deposited in said cylindrical foam [core] catalyst bed, said catalysts including an inlet section noble metal catalyst and a subsequent copper and/or zinc catalyst.

22.(amended) [An oxegenated hydrocarbon] A methanol and ethanol fuel gas autothermal reformer assembly for converting a methanol or ethanol fuel gas stream into a hydrogen-enriched process gas stream, said assembly comprising:
A10 a) a monolithic open cell foam [core] catalyst bed, said catalyst bed including an inlet end and an outlet end, an inlet portion of said catalyst bed being provided with a noble metal[-promoted] catalyst which is operable to combust a portion of the fuel gas stream at a temperature of about 200°F thereby enabling [quick] start up of the reformer assembly while [minimizing] inhibiting carbon deposition in catalyzed cells of said foam [core] catalyst bed;

b) a fuel gas stream inlet passage, said fuel gas stream inlet passage being disposed in heat exchange relationship with [an outlet processed fuel] a process gas stream outlet passage from said catalyst bed, whereby heat [will be] is transferred to said fuel gas inlet passage from the [processed] process gas stream;

c) an air inlet passage, said air inlet passage being disposed in heat exchange relationship with the ~~processed~~ process gas stream whereby heat from the [processed] process gas stream [will be] is transferred to said air inlet passage; and

d) a fuel gas reforming copper and/or zinc catalyst deposited in said foam [core] catalyst bed.

23.(amended) A methanol fuel gas autothermal reformer assembly for converting a methanol fuel gas stream into a hydrogen-enriched process gas stream, said assembly comprising a monolithic open cell foam [core] catalyst bed, said catalyst bed including an inlet end and an outlet end, an inlet portion of said catalyst bed being provided with a noble metal[-promoted] catalyst which is operable to combust a portion of the methanol fuel gas at a temperature of about 200°F thereby enabling [quick] start up of the reformer assembly while [minimizing] inhibiting carbon deposition in catalyzed cells of said foam [core] catalyst bed.

REMARKS

Claims 1-23 have been submitted for examination. The specification has been objected to by the Examiner. The drawings have been objected to by the Examiner. Claims 1-19 and 21 have been objected to by the Examiner.

Claims 1-23 stand rejected under 35 USC §112, second paragraph for many reasons that will be addressed individually below.

Claim 20 stands rejected as being obvious over the combination of Clawson in view of Narumiya et al.

Claims 1-6, 10-12, and 16-19 stand rejected as being obvious over the combination of Clawson in view of Narumiya et al and further in view of Setzer et al '484.